

## ABSTRACT

Epidemiological surveys show that the risk of suffering from childhood leukemia in places near high-voltage power transmission lines is higher. Relevant data and material have been collected and analyzed. I found that the major factor in the high risk of childhood leukemia is ultraviolet radiation (particularly UV-B and UV-C) generated by corona discharge from high-voltage transmission lines.

The present invention provides an electric power system for stably supplying power while suppressing corona discharge generating ultraviolet radiation which may cause health problems in human beings. The corona discharge start voltage varies with the weather. Data on weather forecasts is inputted for each district at certain times so as to calculate the corona discharge estimated start voltage for each transmission line with a computer. If the calculation result predicts start of corona discharge at normal transmission voltage, the transmission voltage of the line is lowered or power transmission through the transmission line is stopped. Another method of solving the problem is to install corona discharge detecting means on transmission lines near places where people reside. If the detecting means detects corona discharge, the transmission voltage is lowered, or the transmission through the transmission line stopped.